

## Recreational Interpretations

### **General**

The purpose of these interpretative ratings are to help engineers, planners, and others understand how soil properties influence behavior when used for recreational uses such as camp areas, picnic areas, playgrounds, and paths and trails. Soils are rated for the uses expected to be important or potentially important to users of soil survey information. Ratings for proposed uses are given in terms of limitations. Only the most restrictive features are listed. Other features may need to be treated to overcome soil limitations for a specific purpose.

Soils are rated in their "natural" state, that is, no unusual modification of the soil site or material is made other than that which is considered normal practice for the rated use. Even though soils may have limitations, it is important to remember that engineers and others can modify soil features or can design or adjust the plans for a recreational use to compensate for most degrees of limitations. Most of these practices are costly. The final decision in selecting a site for a particular use generally involves weighing the costs for site preparation and maintenance.

### **Limitation Ratings**

**SLIGHT** - is the rating given soils that have properties favorable for the use. The degree of limitation is minor and can be overcome easily. Good performance and low maintenance can be expected.

**MODERATE** - is the rating given soils that have properties moderately favorable for the use. This degree of limitation can be overcome or modified by special planning, design, or maintenance. During some part of the year, the expected performance is less desirable than for soils rated slight.

**SEVERE** - is the rating given soils that have one or more properties unfavorable for the rated use, such as steep slopes, bedrock near the surface, flooding, or a seasonal high water table. This degree of limitation generally requires major soil reclamation, special design, or intensive maintenance, which in most situations is difficult and costly.

Other important consideration for evaluating a site include:

- ✓ Location and accessibility of the area
- ✓ Size and shape of the area and its scenic quality
- ✓ The ability of the soil to support vegetation
- ✓ Access to water
- ✓ Potential water impoundment sites available
- ✓ Access to public sewer lines or capacity of the soil to absorb septic tank effluent.

### **Camp Areas**

These are tracts of land used intensively as sites for tents, trailers, campers, and accompanying activities of outdoor living. Camp areas require such site preparation as shaping and leveling in areas for tents and parking areas, for stabilizing roads and intensively used areas, and for installing sanitary facilities and utility lines. Camp areas

are subject to heavy foot traffic and some vehicular traffic. The soils are rated on the basis of soil properties that influence the ease of developing camping area and the performance of the camping area after development. Soil properties that influence trafficability and promote the growth of vegetation after heavy use are also important.

### ***Picnic Areas***

Picnic areas are natural or landscaped tracts used primarily for preparing meals and eating outdoors. These areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking lots. Soils are rated on the basis of properties that influence development costs of shaping the site, trafficability, and growth of vegetation after development. The surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry.

### ***Playgrounds***

These are areas used intensively for games such as baseball, football, and similar activities. Playgrounds require a nearly level soil that is free of stones and that can withstand heavy foot traffic and still maintain adequate vegetation. Soils are rated on the basis of properties that influence cost of shaping, trafficability, and growth of vegetation. Slope and stoniness are the main concerns in developing playgrounds. For good trafficability, the surface of playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry.

### ***Paths and Trails***

Paths and trails are used for walking, horseback riding, and similar uses, and should require little or no cutting and filling in site preparation. Soils are rated on properties that influence trafficability and erodibility. Paths and trails should remain firm under foot traffic and not be dusty when dry.

*This subsection includes:*

- **Recreational Site Development**

## Johnson County, Missouri: Detailed Soil Map Legend

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## Recreation Site Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds		Paths and trails	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
BaB: Barco-----	Not limited		Not limited		Moderately limited ~slope (moderately limited) ~depth to bedrock (slightly limited)	0.40 0.06	Not limited	
BaC: Barco-----	Not limited		Not limited		Very limited ~slope (very limited) ~depth to bedrock (slightly limited)	1.00 0.06	Not limited	
Bk: Blackoar-----	Very limited ~flooding (very limited) ~wetness (very limited)	1.00 1.00	Very limited ~wetness (very limited)	1.00	Very limited ~wetness (very limited) ~flooding (moderately limited)	1.00 0.60	Very limited ~wetness (very limited)	1.00
BoC2: Bolivar-----	Not limited		Not limited		Very limited ~slope (very limited) ~depth to bedrock (moderately limited)	1.00 0.35	Not limited	
BoD2: Bolivar-----	Limited ~slope (limited)	0.63	Limited ~slope (limited)	0.63	Very limited ~slope (very limited) ~depth to bedrock (moderately limited)	1.00 0.35	Not limited	
Br: Bremer-----	Limited ~wetness (limited)	0.97	Limited ~wetness (limited)	0.60	Limited ~wetness (limited)	0.97	Limited ~wetness (limited)	0.60

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds		Paths and trails	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
	~flooding (rare) (limited)	0.90	~too clayey (moderately limited)	0.60	~too clayey (moderately limited)	0.60	~too clayey (moderately limited)	0.60
	~too clayey (moderately limited)	0.60	~percs slowly (moderately limited)	0.39	~percs slowly (moderately limited)	0.39		
DpB: Deepwater-----	Not limited		Not limited		Moderately limited ~slope (moderately limited)	0.40	Not limited	
DpC2: Deepwater-----	Not limited		Not limited		Very limited ~slope (very limited)	1.00	Not limited	
Dt: Dockery-----	Very limited ~flooding (very limited)	1.00	Moderately limited ~flooding (moderately limited)	0.60	Very limited ~flooding (very limited)	1.00	Moderately limited ~flooding (moderately limited)	0.60
	~wetness (limited)	0.60	~too clayey (moderately limited)	0.30	~wetness (limited)	0.60	~too clayey (moderately limited)	0.30
	~too clayey (moderately limited)	0.30	~wetness (slightly limited)	0.28	~too clayey (moderately limited)	0.30	~wetness (slightly limited)	0.28
Fs: Freeburg-----	Limited ~flooding (rare) (limited)	0.90	Moderately limited ~wetness (moderately limited)	0.45	Limited ~wetness (limited)	0.80	Moderately limited ~wetness (moderately limited)	0.45
	~wetness (limited)	0.80						
GoC2: Gorin-----	Limited ~wetness (limited)	0.60	Moderately limited ~percs slowly (moderately limited)	0.39	Very limited ~slope (very limited)	1.00	Slightly limited ~wetness (slightly limited)	0.28
	~percs slowly (moderately limited)	0.39	~wetness (slightly limited)	0.28	~wetness (limited)	0.60		
					~percs slowly (moderately limited)	0.39		
Hg: Haig-----	Limited ~wetness (limited)	0.97	Limited ~wetness (limited)	0.60	Limited ~wetness (limited)	0.97	Limited ~wetness (limited)	0.60

## Recreation Site Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds		Paths and trails	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
	~percs slowly (moderately limited)	0.39	~percs slowly (moderately limited)	0.39	~percs slowly (moderately limited)	0.39		
Hp: Haplaquents-----	Very limited ~percs slowly (very limited)	1.00	Very limited ~percs slowly (very limited)	1.00	Very limited ~percs slowly (very limited)	1.00	Not limited	
Urban land-----	Not rated		Not rated		Not rated		Not rated	
HtA: Hartwell-----	Very limited ~wetness (very limited) ~percs slowly (moderately limited)	1.00 0.39	Limited ~wetness (limited) ~percs slowly (moderately limited)	0.99 0.39	Very limited ~wetness (very limited) ~percs slowly (moderately limited)	1.00 0.39	Limited ~wetness (limited)	0.99
HtB2: Hartwell-----	Very limited ~wetness (very limited) ~percs slowly (moderately limited)	1.00 0.39	Limited ~wetness (limited) ~percs slowly (moderately limited)	0.99 0.39	Very limited ~wetness (very limited) ~slope (moderately limited) ~percs slowly (moderately limited)	1.00 0.40 0.39	Limited ~wetness (limited)	0.99
HxC: Higginsville-----	Moderately limited ~wetness (moderately limited)	0.38	Slightly limited ~wetness (slightly limited)	0.13	Limited ~slope (limited) ~wetness (moderately limited)	0.98 0.38	Slightly limited ~wetness (slightly limited)	0.13
Ka: Kanima-----	Very limited ~slope (very limited) ~too clayey (moderately limited) ~small stones (moderately limited)	1.00 0.60 0.50	Very limited ~slope (very limited) ~too clayey (moderately limited) ~small stones (moderately limited)	1.00 0.60 0.50	Very limited ~slope (very limited) ~small stones (very limited) ~too clayey (moderately limited)	1.00 1.00 0.60	Very limited ~slope (very limited) ~too clayey (moderately limited)	1.00 0.60

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds		Paths and trails	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Lg: Lightning silt loam	Very limited ~flooding (very limited) ~percs slowly (very limited) ~wetness (very limited)	1.00 1.00 1.00	Very limited ~percs slowly (very limited) ~wetness (limited)	1.00 0.99	Very limited ~percs slowly (very limited) ~wetness (very limited) ~flooding (moderately limited)	1.00 1.00 0.60	Limited ~wetness (limited)	0.99
MaB: Macksburg-----	Slightly limited ~percs slowly (slightly limited)	0.13	Slightly limited ~percs slowly (slightly limited)	0.13	Slightly limited ~percs slowly (slightly limited) ~slope (slightly limited)	0.13 0.10	Not limited	
MdB: Mandeville-----	Not limited		Not limited		Moderately limited ~slope (moderately limited) ~depth to bedrock (moderately limited)	0.40 0.35	Not limited	
MdC: Mandeville-----	Not limited		Not limited		Very limited ~slope (very limited) ~depth to bedrock (moderately limited)	1.00 0.35	Not limited	
Nd: Nodaway-----	Very limited ~flooding (very limited)	1.00	Not limited		Moderately limited ~flooding (moderately limited)	0.60	Not limited	
NoD: Norris-----	Limited ~shallow to bedrock (limited) ~slope (slightly limited) ~small stones (slightly limited)	0.90 0.16 0.06	Limited ~shallow to bedrock (limited) ~slope (slightly limited) ~small stones (slightly limited)	0.90 0.16 0.06	Very limited ~bedrock <20 in. (very limited) ~slope (very limited) ~small stones (limited)	1.00 1.00 1.00	Not limited	

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds		Paths and trails	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
NoF: Norris-----	Very limited ~slope (very limited) ~shallow to bedrock (limited) ~small stones (slightly limited)	1.00  0.90  0.06	Very limited ~slope (very limited) ~shallow to bedrock (limited) ~small stones (slightly limited)	1.00  0.90  0.06	Very limited ~slope (very limited) ~bedrock <20 in. (very limited) ~small stones (limited)	1.00  1.00  1.00	Limited ~slope (limited)	0.67
Pd: Pits-----	Not rated		Not rated		Not rated		Not rated	
PoB: Polo-----	Not limited		Not limited		Moderately limited ~slope (moderately limited)	0.40	Not limited	
PoC2: Polo-----	Not limited		Not limited		Very limited ~slope (very limited)	1.00	Not limited	
SaB: Sampsel-----	Very limited ~wetness (very limited) ~too clayey (moderately limited) ~percs slowly (moderately limited)	1.00  0.60  0.39	Very limited ~wetness (very limited) ~too clayey (moderately limited) ~percs slowly (moderately limited)	1.00  0.60  0.39	Very limited ~wetness (very limited) ~too clayey (moderately limited) ~slope (moderately limited)	1.00  0.60  0.40	Very limited ~wetness (very limited) ~too clayey (moderately limited)	1.00  0.60
SaC: Sampsel-----	Very limited ~wetness (very limited) ~too clayey (moderately limited) ~percs slowly (moderately limited)	1.00  0.60  0.39	Very limited ~wetness (very limited) ~too clayey (moderately limited) ~percs slowly (moderately limited)	1.00  0.60  0.39	Very limited ~wetness (very limited) ~slope (very limited) ~too clayey (moderately limited)	1.00  1.00  0.60	Very limited ~wetness (very limited) ~too clayey (moderately limited)	1.00  0.60
SaC3: Sampsel-----	Very limited		Very limited		Very limited		Very limited	

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds		Paths and trails	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
	~wetness (very limited)	1.00	~wetness (very limited)	1.00	~wetness (very limited)	1.00	~wetness (very limited)	1.00
	~too clayey (moderately limited)	0.60	~too clayey (moderately limited)	0.60	~slope (very limited)	1.00	~too clayey (moderately limited)	0.60
	~percs slowly (moderately limited)	0.39	~percs slowly (moderately limited)	0.39	~too clayey (moderately limited)	0.60		
ShB: Sharpsburg-----	Slightly limited		Slightly limited		Moderately limited		Not limited	
	~percs slowly (slightly limited)	0.13	~percs slowly (slightly limited)	0.13	~slope (moderately limited)	0.40		
					~percs slowly (slightly limited)	0.13		
SnD2: Snead-----	Limited		Limited		Very limited		Moderately limited	
	~slope (limited)	0.63	~slope (limited)	0.63	~slope (very limited)	1.00	~too clayey (moderately limited)	0.60
	~too clayey (moderately limited)	0.60	~too clayey (moderately limited)	0.60	~depth to bedrock (limited)	0.66		
	~percs slowly (moderately limited)	0.39	~percs slowly (moderately limited)	0.39	~too clayey (moderately limited)	0.60		
SoD: Snead-----	Moderately limited		Moderately limited		Very limited		Moderately limited	
	~too clayey (moderately limited)	0.60	~too clayey (moderately limited)	0.60	~slope (very limited)	1.00	~too clayey (moderately limited)	0.60
	~percs slowly (moderately limited)	0.39	~percs slowly (moderately limited)	0.39	~depth to bedrock (limited)	0.66		
	~slope (slightly limited)	0.16	~slope (slightly limited)	0.16	~too clayey (moderately limited)	0.60		
Rock outcrop-----	Not rated		Not rated		Not rated		Not rated	
SoF: Snead-----	Very limited		Very limited		Very limited		Moderately limited	
	~slope (very limited)	1.00	~slope (very limited)	1.00	~slope (very limited)	1.00	~too clayey (moderately limited)	0.60
	~too clayey (moderately limited)	0.60	~too clayey (moderately limited)	0.60	~depth to bedrock (limited)	0.66	~slope (moderately limited)	0.50



Map symbol and soil name	Camp areas		Picnic areas		Playgrounds		Paths and trails	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
	~percs slowly (moderately limited)	0.39	~percs slowly (moderately limited)	0.39	~too clayey (moderately limited)	0.60		
Rock outcrop-----	Not rated		Not rated		Not rated		Not rated	
W: Water-----	Not rated		Not rated		Not rated		Not rated	
Wa: Wabash-----	Very limited ~flooding (very limited)	1.00	Very limited ~wetness (very limited)	1.00	Very limited ~flooding (very limited)	1.00	Very limited ~wetness (very limited)	1.00
	~wetness (very limited)	1.00	~percs slowly (very limited)	1.00	~wetness (very limited)	1.00	~too clayey (very limited)	1.00
	~percs slowly (very limited)	1.00	~too clayey (very limited)	1.00	~percs slowly (very limited)	1.00	~flooding (moderately limited)	0.60
WdB: Weller-----	Moderately limited ~percs slowly (moderately limited)	0.39	Moderately limited ~percs slowly (moderately limited)	0.39	Moderately limited ~slope (moderately limited)	0.40	Not limited	
					~percs slowly (moderately limited)	0.39		
WFB: Winfield-----	Not limited		Not limited		Moderately limited ~slope (moderately limited)	0.40	Not limited	
WFC: Winfield-----	Not limited		Not limited		Limited ~slope (limited)	0.98	Not limited	
WFC3: Winfield-----	Not limited		Not limited		Limited ~slope (limited)	0.98	Not limited	

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds		Paths and trails	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Zk: Zook-----	Very limited ~flooding (very limited)	1.00	Very limited ~wetness (very limited)	1.00	Very limited ~flooding (very limited)	1.00	Very limited ~wetness (very limited)	1.00
	~wetness (very limited)	1.00	~flooding (moderately limited)	0.60	~wetness (very limited)	1.00	~flooding (moderately limited)	0.60
	~too clayey (moderately limited)	0.60	~too clayey (moderately limited)	0.60	~too clayey (moderately limited)	0.60	~too clayey (moderately limited)	0.60